

NOV 19 2009

Dr. Bruce Chrisman
Chief Operating Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Dr. Chrisman:

SUBJECT: FERMI SITE OFFICE REPORT ON ENVIRONMENTALLY PREFERABLE
PURCHASING

As part of our Operational Oversight Program and Integrated Assessment Schedule, the Department of Energy, Fermi Site Office, initiated an assessment of Environmentally Preferable Purchasing (EPP) at Fermilab. Mr. Joe DiMatteo of the DOE Chicago Office performed the assessment on September 23-25, 2009. We want to thank Fermilab, and in particular Ms. Amber Larson, for the logistical and coordination efforts involved with completing this assessment.

Enclosed is the final report. In October, 2009, the Fermi Site Office provided a draft electronic copy of this report to Fermilab staff for review, comment, and a factual accuracy check. My staff has reviewed and addressed all comments received.

The new DOE assessment protocols identify three levels of findings, which have been applied in this assessment:

Level 1 Findings – These are issues of major significance that warrant a high level of attention on the part of line management. Typically these reflect a gap in addressing requirements or a systemic problem with implementing requirements. If left uncorrected, this level of finding could negatively impact the adequacy of operations and/or accomplishment of the SC mission.

Level 2 Findings – These are issues that represent a non-conformance and/or deviation with implementation of a requirement. Multiple issues at this level, when of a similar nature, may be rolled-up together into one or more Level 1 Findings.

Level 3 Findings – These are issues where it is recognized that improvements can be gained in process, performance, or efficiency already established for meeting a requirement. This level of finding should also include minor deviations observed during oversight activities that have been promptly corrected on the spot and verified as completed.

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The EPP assessment identified three Level 3 Findings:

1. Identification of EPP Products & Activities: Fermilab needs to identify products and categories of products for which EPP options exist. The DOE Pollution Prevention Tracking and Reporting System that Fermilab uses for annual reporting contains lists of applicable categories and products, as do U.S. Environmental Protection Agency Comprehensive Procurement Guidelines at <http://www.epa.gov/epawaste/conserve/tools/cpg/pdf/cpg-fs.pdf>.
2. Clearly Assigned EPP Roles & Responsibilities: Fermilab needs to assign and document clear roles and responsibilities for various EPP functions and to ensure that the appropriate EPP training has been given to personnel commensurate with their function.
3. Environmental Management Program for the EPP Study: Fermilab needs to complete the Environmental Management Program related to the study of the EPP Program and to ensure that its recommendations are implemented.

Please review the report and prepare a Corrective Action Plan for these findings. The Plan should demonstrate your consideration of what specific actions will be taken to improve the EPP program and should include a proposed schedule for targeted achievements. We will appreciate your notifying this office by January 31, 2010 of the action(s) you will take to address the report findings. If you feel that action is not warranted, please provide a sound basis for that opinion.

We certainly appreciate the participation and candor of all who participated in this constructive assessment. In particular, we recognize the efforts of the Business Services Section; the Environment, Safety and Health Section; the Computing Division; and the Accelerator Division for their input and cooperation. We anticipate that the remaining Fermilab organizations also will be integral in making the evolving EPP program a resounding success.

Thank you for sharing the report with the Fermilab Divisions and Sections, as appropriate. These organizations no doubt will need to participate in and support the lab-wide EPP initiatives in the future.

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Dr. Bruce Chrisman

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If you have any questions or comments concerning the enclosed report, please contact Sally Arnold on extension 2239.

Sincerely,

Mark E. Bollinger
Acting Site Manager

Enclosure:
As Stated

cc: P. Oddone, w/o encl.
Y.-K. Kim, w/o encl.
D. Carlson, w/encl.
N. Grossman, w/encl.

bc: S. Arnold, w/encl.
J. Scott, w/o encl.
J. DiMatteo, DOE-CH, w/encl.
E. Mieland, w/encl.

Environmental Preferable Purchasing Assessment Report October 16, 2009

Joe DiMatteo, Department of Energy – Chicago Office

Background: The Department of Energy (DOE) Fermi Site Office (FSO) requested that the DOE-Chicago Office assist FSO in its independent oversight program at Fermilab in completing an Operational Assessment Plan review of Environmentally Preferable Purchasing (EPP) at the Fermi National Accelerator Laboratory (Fermilab). The Chicago Office (Mr. Joe DiMatteo) completed the review during September 23-25, 2009. Specifically, FSO was interested in determining Fermilab compliance with Executive Order (E.O.) 13423, “Strengthening Energy Environmental and Transportation Management.”

E.O. 13423, Section 2(d) provides requirements for “sustainable practices” for Federal Government procurements of products and services. Additionally, Section 2(h) provides the “sustainable practices” for procuring electronics and the requirement that they meet certain Electronic Product Environmental Assessment Tool (EPEAT) standards.

Fermilab reports annually to the DOE on EPP-listed products through the Pollution Prevention Tracking and Reporting System (PPTRS). Fermilab has established and maintains an Environmental Management System (EMS) and is registered to the International Organization for Standardization (ISO) 14001 Standard; the Fermilab EMS references E.O. 13423 as an applicable standard.

Objective: The assessment objective was to evaluate the status of the EPP Program at Fermilab, as part of the FSO independent oversight program, against the requirements of E.O. 13423 and associated implementing instructions issued by Office of the Federal Environmental Executive.

Scope & Assessment Approach: The overall scope of the assessment included evaluating the EPP program structure, assigned roles and responsibilities at Fermilab, and recently completed activities. The assessment consisted of interviews with appropriate personnel and the review of documentation and records. The specific scope focused on the following processes and topical areas:

- Policies & Implementing Mechanisms
- Roles & Responsibilities
- EMS Objectives & Targets
- Fermilab Procurement Manual & Business Systems
- Pollution Prevention Tracking & Reporting System
- Flow down of EPP to Subcontractors
- Electronics
- Food Service & Janitorial Products

Results: The assessment results of the EPP Program are discussed as follows:

- **Policies & Implementing Mechanisms:** Fermilab has established and maintains an EMS that provides in part the system for identifying and complying with environmental requirements as well as setting environmental performance goals appropriate for their operations and activities. The EMS identified E.O. 13423 as an applicable requirement related to EPP. The EMS references the Fermilab Environment, Safety and Health Manual (FESHM) as the mechanism that describes the implementation of certain environmental program elements. Specifically, FESHM Chapter 8022 – “Waste Minimization and Pollution Prevention” provides the element that describes EPP. The reference to the EPP Program element in Chapter 8022 does not fully describe all Laboratory activities that have EPP aspects and how they are managed.
- **Roles & Responsibilities:** The EMS provides responsibilities for personnel at Fermilab in implementing the environmental programs as well as responsibilities for all personnel to recognize environmental consequences of their job duties and to conduct their activities according to Laboratory environmental policies and goals. FESHM Chapter 8022 – “Waste Minimization and Pollution Prevention” provides that the EPP Program is run through Business Services Section (BSS), Purchasing Group. Though the FESHM Chapter does refer to the EPP Program responsibilities, it does not fully prescribe responsibilities across all Laboratory organizational units that have EPP aspects involved for their job function.

EPP at Fermilab includes a wide range of activities, such as: managing procurement/purchasing functions found in the BSS; Fermilab personnel submitting specific procurement requests or making direct purchases; managing subcontractor operations; or Fermilab personnel providing technical support for the implementation of the EPP Program. Thus, the scope of the EPP Program across the Laboratory is broad and affects numerous job functions and job responsibilities. EPP Program responsibilities need to be evaluated, so that specific responsibilities can be assigned and personnel can be appropriately trained in commensurate competencies required for their responsibilities.

- **EMS Objectives & Targets:** The EMS at Fermilab utilizes the Environmental Management Program (EMP) process to set Objectives and Targets for improving environmental performance related to its significant environmental aspects. One EMP on a Laboratory-wide level specific to EPP has been set and the responsibility is assigned to BSS. The purpose of this EMP is to study and recommend improvements for the Laboratory’s EPP Program. The completion of this EMP is overdue, and this EMP has been placed on hold.

A related EMP is Fermilab’s continued involvement in the Federal Electronic Challenge (FEC); Fermilab is attempting to achieve higher levels in the FEC. The EMS EMP process for the EPP Program at this time is not fully capturing all EPP

activities and could be expanded to allow more significant environmental improvement in this area.

- **Fermilab Procurement Manual & Business Systems:** The BSS manages the procurement function at Fermilab. BSS is in the process of revising the Fermilab Procurement Policy and Procedure Manual to include a section on EPP. Draft language was reviewed and found to address, in part, certain of the EPP requirements; however linkages to other manuals (i.e., FESHM), systems (EMS) and processes are necessary if the EPP Program is to adequately capture the scope of EPP activities across the Laboratory.

BSS uses the eOracle Business System as its mechanism to record and report certain of its purchases and acquisitions. The eOracle Business System is one mechanism Fermilab utilizes to track and report EPP purchases as well as items that can be recycled (i.e., Flex Field). Procurements made through this eOracle Business System may be subject to approvals by organizational Environmental Officers who may be aware of EPP requirements; however, it is not clear whether this process is implemented Laboratory-wide. The eOracle Business System appears to have the functionality to facilitate EPP tracking and reporting; although it is unclear whether all personnel understand how to use this capability.

BSS also administers the "Procard" system for certain qualified users. The Procard System does not appear to have the functionality to determine what products are EPP; it appears that no purchases made through Procard are included in any EPP reports.

- **Pollution Prevention Tracking & Reporting System (PPTRS):** The PPTRS is the mechanism DOE employs to provide its annual report to the Council of Environmental Quality. Fermilab, on behalf of FSO, annually inputs EPP data online into the PPTRS. Fermilab culls EPP data from a number of sources such as BSS (i.e., eOracle Business System), the Facilities Engineering Services Section, and various subcontractors.

The current process of collecting information from various organizations at Fermilab does not appear to provide for a systematic approach to ensure that all data are fully captured in a uniform manner consistent with PPTRS requirements. Additionally, the PPTRS is an online database managed by DOE, and recording the EPP data call information as a permanent record appears to be difficult. The PPTRS data calls that were reviewed were found to be confusing in determining whether they fully addressed the EPP requirements. It should be noted that the ISO 14001 Standard requires that permanent records must be kept for certain EMS elements and operations.

- **Flow down of EPP to Subcontractors:** Fermilab has a Laboratory Policy emphasizing the importance of environment, safety and health (ES&H) for all subcontractors who conduct business with Fermilab. Additionally, Fermilab has

well-developed processes for collecting information on subcontractor safety and has standard clauses and procedures related to ES&H performance in its various manuals. Fermilab is currently developing standard clauses related to EPP requirements that are intended to flow down into subcontracts. The flow down of certain EPP activities to subcontractors, specifically those related to food services is occurring, even though it is not contractually required. The flow down of certain EPP activities is required in the custodial contract.

- **Electronics:** Fermilab is participating in the FEC and has achieved “Bronze Award” status and is intending to pursue higher levels of FEC award status. If Fermilab is to achieve higher levels of FEC award status it will need to document a procurement level of 95% for EPEAT certified electronics. Currently, Fermilab has not documented that it has reached this level. Additionally, Fermilab is developing a Laboratory Policy and implementing mechanisms regarding the procurement of EPEAT certified electronic products. Additionally, Fermilab is either recycling or reusing their electronic products. The electronic recycler that Fermilab is using has been the subject of facility environmental audits to ensure that the recycling is being appropriately conducted.
- **Food Service & Green Janitorial Products:** Fermilab subcontracts both food service and cleaning operations. At the time of this assessment, the food service containers were generally not biodegradable, although Fermilab was using one product that is biodegradable, had done cost comparisons, and was considering increasing the use of biodegradable food containers. Fermilab is recycling paper/cardboard products and is reporting the rate in the PPTRS. Fermilab is using a number of “green” janitorial products for cleaning operations.

References:

FESHM Chapter 8010 – Environmental Management System, 4/24/08
FESHM Chapter 8022 – Waste Minimization and Pollution Prevention Awareness Program, 5/24/05
Memo, P. Oddone, to Potential Offerors, the Importance of Environment, Safety and Health, 9/23/05
Environmental Management Program Form; Materials, Procurement, EPP, 3/20/09
Draft Fermilab Procurement Policy and Procedures Manual, Section 15
Fermilab Manual, FL-200, section 13, (d) & (e), 7/08 and draft for inclusion entitled EPP Fermilab Subcontractor Safety Information Questionnaire, FESHM 7010-1, Rev.01/06
Fermilab Procurement Card User’s Guide, 1/08
Oracle eBS Report, Recycled Purchase Orders Lines for FY 2008
Memo, J. Hall to J. Collins, Recycling (screen shot for flex field), 9/23/09
Draft Personal Computing Environmental Policy
Recyclables Report for Southern Foodservice Mgt., 10/07-9/08
Memo, J. Hawkins to A. Larson, “Green Products”, 9/28/09
Memo, J. Hawkins to A. Larson, “Green Products”, 9/24/09
DOE FY 2007 EPP Reports inputted into PPT&RS

DOE FY 2008 EPP Reports inputted into PPT&RS
Report, Intercon Solutions Facility Review

Personnel Interviewed:

E. Mieland, ES&H Section
A. Larson, ES&H Section
G. Mitchell, Business Services Section
B. Koncelik, Business Services Section
B. Johnson, Business Services Section
J. Collins, Business Services Section
J. Kelly, Business Services Section
J. Hawkins, Business services Section
A. Pavnica, Computing Division
B. Fritz, Accelerator Division
D. Sigmon, Accelerator Division

Conclusions: The EMS is the appropriate system to document the EPP Program and Fermilab does have a reference to EPP in its EMS; however the EMS does not adequately describe the implementing mechanisms for meeting EPP requirements. The implementing mechanisms need to ensure that the specific EPP products purchased and activities applicable to Fermilab are identified so that they may be accurately reported to DOE and all Fermilab systems. Processes and manuals such as the FESHM need to be documented in the EMS to allow for personnel to understand the EPP programmatic requirements.

The EMS needs to assign clear roles and responsibilities for the EPP Program. Clearly assigned roles and responsibilities that are documented are necessary to ensure that numerous interfaces between organizational units at Fermilab are integrated and coordinated. Additionally, clearly assigned roles and responsibilities will allow for the appropriate training to be developed and given for meeting EPP requirements commensurate with assigned programmatic function.

Fermilab needs to complete its study on improving EPP Program implementation and Performance. Fermilab is aware that the EPP Program needs improvement to be fully functioning and to ensure it provides an accurate reporting of the Laboratory's EPP performance. Fermilab has initiated an EMP on a Laboratory-wide level (a top down approach) as part of the EMS Objective and Target process to studying its EPP Program and providing recommendations for its improvement and needs to pursue this initiative. Additionally, many opportunities exist to focus other EMPs on specific EPP products such as increased use of biodegradable food containers (a bottoms up approach).

The PPTRS is the mechanism that DOE utilizes to report EPP performance on a Department-wide basis, and given the segmentation of EPP activities through many organizational units at Fermilab, it is quite likely that Fermilab is underreporting its EPP performance. As discussed earlier, having a well-documented program structure with references to implementing mechanisms and organizational interfaces in the EMS is fundamental so that accurate reporting can be accomplished.

Finding Level Definitions

Level 1 Findings – These are issues of major significance that warrant a high level of attention on the part of line management. Typically these reflect a gap in addressing requirements or a systemic problem with implementing of requirements. If left uncorrected, this level of finding could negatively impact the adequacy of operations and/or accomplishment of the SC mission.

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Level 3 Findings – These are issues where it is recognized that improvements can be gained in process, performance, or efficiency already established for meeting a requirement. This level of finding should also include minor deviations observed during oversight activities that have been promptly corrected on the spot and verified as completed.

Assessment Findings

Level 3 Findings:

- **Identification of EPP Products & Activities:** Fermilab needs to evaluate and identify from the PPT&RS EPP Lists the products and categories that specifically apply to the EPP products that Fermilab procures.
- **Clearly Assigned EPP Roles & Responsibilities:** Fermilab needs to assign and document clear roles and responsibilities for various EPP functions and to ensure that the appropriate EPP training has been given to personnel commensurate with their function.
- **EMP for the EPP Study:** Fermilab needs to complete the EMP related to the study of the EPP Program and to ensure that all of its recommendations and implemented.